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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,872	09/30/2003	Jimmie Earl DeWitt JR.	AUS920030487US1	6779
35525	7590	06/05/2006	EXAMINER	
IBM CORP (YA)			VO, TED T	
C/O YEE & ASSOCIATES PC			ART UNIT	
P.O. BOX 802333			PAPER NUMBER	
DALLAS, TX 75380			2191	

DATE MAILED: 06/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/675,872	Applicant(s) DEWITT ET AL.	
	Examiner Ted T. Vo	Art Unit 2191	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 9/30/03 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4/30/03, 7/1/05, 1/4/06, 1/30/06, 2/14/06, 4/25/06</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to the communication filed on 09/30/2003.
Claims 1-25 are pending in the application.

Information Disclosure Statement

2. The publication/information, which is not initialed by Examiner, listed in Applicant's Form PTO-1449, submitted on 9/30/03, fails to comply with 37 CFR 1.98 (a) (3) (i and ii).

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.
4. The claims 1-2, 4-7, 8-9, 11-14, 15-16, 18-21, 22-25 are rejected under 35 U.S.C 101 because the claimed invention is directed to non-statutory subject matter.

As per claims 1-2, 4-7, 8-9, 11-14, 15-16, 18-21, 22-25: A claim is statutory if it produces a practical, concrete, and tangible result. Claims 1-2, 4-7, 8-9, 11-14, 15-16, 18-21, 22-25, fail to meet such a requirement.

Analysis: regarding the limitation of claim 1, the claim recites a series of identification steps. A method that is merely for identifying is considered as an incomplete process. Therefore it fails to produce any result. Thus, Claim 1 fails to produce a practical, concrete, and tangible result.

Regarding claim 2, claim 2 is independent to claim 1, and further recites, "enabling counting". This step is introduces an indication. Its scope as a whole fails to produce an end result.

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Regarding claims 4, it remains reciting identifying. Regarding claim 5, it intends to an execution, but remains within the identifying step of claim 4; thus this recitation is an intended purpose within identification that cannot produce any and result.

Regarding claim 6, it further recites comparing; however, the limitation fails to cause the scope of the claims as a whole, to produce a result.

Regarding claim 7, it depends on claim 1 and further recites "setting the set of the registers", the scope of the claims as a whole remains producing no end result.

Regarding claims 8-9, 11-14, 15-16, 18-21, 22-25, the claims reciting the limitations that are identified as in the same manner as in Claims 1-2, 4-7.

The analysis shows the Claims fail to produce and end result therefore fail to produce any practical, concrete, and tangible result. The claims are non-statutory.

5. The claims 24-25 are further rejected under 35 U.S.C 101 because the claimed invention is directed to non-statutory subject matter.

As per claims 24-25: A claim is statutory if it meets practical, concrete, and tangible result.

Claims 24-25 fail to meet such a requirement.

Analysis: Claims 24-25 have been identified as providing no result as addressed in the section 3 of this issue, the claims, as a whole, recite a computer program product in a computer readable medium, where in the specification, the medium included a transmission-type media such digital and analog communication links, wireless communications links, radio frequency, light wave transmissions, etc., are non-statutory subject matters and rejected under 35 U.S.C. 101.

Claims that recite nothing but the physical characteristics of a form of energy, such as a frequency, voltage, or the strength of a magnetic field, define energy or magnetism, per se, and as such are nonstatutory natural phenomena. O'Reilly v. Morse, 56 U.S. (15 How.) 62, 112-14 (1853). However, a signal claim directed to a practical application of electromagnetic energy is statutory regardless of its transitory nature. See O'Reilly, 56 U.S. at 114-19; In re Breslow, 616 F.2d 516, 519-21, 205 USPQ 221, 225-26 (CCPA 1980).

Specification

6. This specification is objected to. The section "Brief Description Of The Drawings" fails to provide a brief to Figure 6A and Figure 6B.

Further reminding: All the blanks should be filled when information is available

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claim 1-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Merten et al., "A Hardware-Driven Profiling Scheme for Identifying Program Hot Spot to support Runtime Optimization.

Given the broadest reasonable interpretation of followed claims in light of the specification.

As per Claim 1: Merten discloses,

A method in a data processing system for monitoring execution of instructions, the method comprising:

identifying an instruction for execution;

determining whether the instruction is within a contiguous range of instructions (In run-time of a program,

Merten depicts a code block: See left col., p.137:2-18; depicts a code region: See left col., sec. 2, p. 138:

These read limitation, "*contiguous range of instructions*". For execution, when the execution falls in the

determined code region, it is known that every executed instruction in the region is within, and this is the

purpose in which Merten runs the code for monitoring and identifying hotspots);

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and identifying execution information relating to the instruction if the instruction is within the contiguous range of instructions (Merten uses profiling to identify execution information, and to particularly identify the executions of branches within that code region: See sec. 2.1.1, p. 139) .

As per Claim 2: Merten discloses, *The method of claim 1 further comprising: enabling counting of each event associated with execution of the instruction if the instruction is within the contiguous range of instructions to enable generation of execution information.* (See sec. 2.1.1, each branch execution in the determined code region are counted).

As per Claim 3: Merten discloses, *The method of claim 2, wherein the enabling step comprises: sending a signal from an instruction cache to a performance monitor unit* (See sec. 2.1.1, e.g. BTB/I-cache); *and counting each event associated with an execution of the instruction if the instruction is within the contiguous range of memory instructions to form the execution information* (See sec. 2.1.1, e.g. "branch execution count").

As per Claim 4: Merten discloses, *The method of claim 1 further comprising: determining whether the instruction is within a second contiguous range of instructions; and identifying the execution information relating to the instruction if the instruction is within the second contiguous range of instructions* (See sec. 2.1.1, e.g., monitor a short interval of a branch/candidate branch) .

As per Claim 5: Merten discloses, *The method of claim 1, wherein the execution information includes at least one of a number of visits to the range of instructions and a number of times the instruction has been executed* (Refer to "profiling" and the value given by counter, performed by the BBB in section 2.1.1).

As per Claim 6: Merten discloses, *The method of claim 1, wherein the determining step comprises: comparing an address of the instruction to set of addresses in a set of registers in a processor to determine whether the instruction is in the contiguous range of instructions.*, because every branch in the code region is recorded in the Branch Behavior Buffer.

As per Claim 7: Merten discloses, *The method of claim 6 further comprising: setting the set of registers using a performance tool.*, because the BBB has means of a set of registers, and each address location stored in the buffer is set by hardware scheme (performance tool).

As per Claims 8-14: Merten discloses Claims 8-14. See rationale addressed in Claims 1-7 above.

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As per Claims 15-21: Merten discloses Claims 15-21. See rationale addressed in Claims 1-7 above.

As per Claims 22-23: Merten discloses Claims 22-23. See rationale addressed in Claims 1-2 above.

As per Claim 24: Merten discloses Claim 24. See rationale addressed in Claim 1 above.

As per Claim 25: Merten discloses Claim 25. See rationale addressed in Claim 1 above.

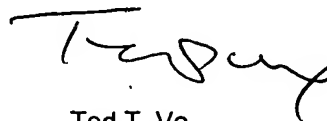
Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ted T. Vo whose telephone number is (571) 272-3706. The examiner can normally be reached on 8:00AM to 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wei Y. Zhen can be reached on (571) 272-3708.

The facsimile number for the organization where this application or proceeding is assigned is the Central Facsimile number **571-273-8300**.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist: 571-272-2100. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ted T. Vo
Primary Examiner
Art Unit 2191
May 25, 2006